AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

1. **(Cancelled)**

2. **(Currently Amended)** The optical device of claim 1~~1~~, wherein the TEC optical fiber is comprised in an optical fiber pigtail that is permanently affixed in the optical device.

3. **(Currently Amended)** The optical device of claim 1~~1~~, further comprising an active component configured to output the light to the focusing lens.

4. **(Original)** The optical device of claim 3, wherein the active component comprises a laser diode.

5. **(Currently Amended)** The optical device of claim 1~~1~~, further comprising a passive component configured to process the light and output the light to the focusing lens.

6. **(Currently Amended)** The optical device of claim 1~~1~~, further comprising an additional TEC optical fiber that includes a second core, wherein a diameter of the second core at a first end of the additional TEC optical fiber is larger than the diameter of the second core in an unexpanded portion of the additional TEC optical fiber.

7. **(Original)** The optical device of claim 6, wherein the additional TEC optical fiber is configured to input the light into the optical device from the first end of the additional TEC optical fiber.

8. **(Cancelled)**

9. **(Currently Amended)** The method of claim 158, wherein the TEC optical fiber is comprised in an optical fiber pigtail that is permanently affixed in the optical device.

10. **(Currently Amended)** The method of claim 158, further comprising an active component outputting the light to the focusing lens.

11. **(Original)** The method of claim 10, wherein the active component comprises a laser diode.

12. **(Currently Amended)** The method of claim 158, further comprising a passive component processing the light and outputting the light to the lens.

13. **(Currently Amended)** The method of claim 158, wherein an additional TEC optical fiber includes a second core, wherein a diameter of the second core at a first end of the second TEC optical fiber is larger than the diameter of the second core in an unexpanded portion of the second optical fiber, wherein the method further comprises the additional TEC optical fiber outputting the light from the first end of the additional TEC optical fiber.

14. **(Currently Amended)** An optical device comprising:

a TEC (Thermal-Diffusion Expanded Core) optical fiber having ~~including:~~

a first core, wherein a diameter of the first core at a first end of the TEC optical fiber is in a range from 20μ to 50μ and ~~larger than~~ a diameter of the first core in an unexpanded portion of the TEC optical fiber is in a range from 6μ to 11μ; and

a dielectric coating formed on the first end; and

a focusing lens configured to focus light into the first end of the TEC optical fiber such that a light spot created by the focused light on a surface of the first end of the TEC optical fiber has a light spot diameter that is larger than the diameter of the first core in the unexpanded portion of the TEC optical fiber, but no larger ~~smaller~~ than the diameter at the first end of the TEC optical fiber, wherein the light focused into the first end:

has an optical power that is large enough that contaminants or irregularities at the first end would cause the dielectric coating to be damaged if the light spot diameter were to be the same as the diameter of the first core in the unexpanded portion of the TEC optical fiber.

15. **(Currently Amended)** A method of operating an optical device comprising:

providing light to a lens within the optical device; and

the lens focusing the light into a first end of a TEC (Thermal-Diffusion Expanded Core) optical fiber having a first core and a first cladding, wherein a diameter of the first core at a first end of the TEC optical fiber is in a range from 20μ to 50μ and ~~larger than a~~ diameter of the first core in an unexpanded portion of the TEC optical fiber is in a range from 6μ to 11μ;

wherein:

a light spot created by said focusing on a surface of the first end of the TEC optical fiber has a light spot diameter that is larger than the diameter of the first core in the unexpanded portion of the first core, but no larger ~~smaller~~ than the diameter at the first end of the TEC optical fiber; and

the light focused into the first end has an optical power that is large enough that contaminants or irregularities at the first end would have caused a dielectric coating formed on the first end to have been damaged if the light spot diameter were to have been the same as the diameter of the first core in the unexpanded portion of the TEC optical fiber.

16. (New) The optical device of claim 14, wherein the optical power is at least 1W.

17. (New) The optical device of claim 16, wherein:

the light spot diameter is at least 20μ; and

the optical power that is small enough that contaminants or irregularities at the first end do not cause the dielectric coating to be damaged when the focusing lens focuses the light into the first end of the TEC optical fiber.

18. (New) The method of claim 15, wherein the optical power is at least 1W.

19. (New) The method of claim 18, wherein:

the light spot diameter is at least 20μ; and

the optical power that is small enough that contaminants or irregularities at the first end do not cause the dielectric coating to be damaged when the focusing lens focuses the light into the first end of the TEC optical fiber.